

surface of the ocean. The illusion was augmented when the disk of the sun appearing on the horizon, repeated its image by the effects of refraction, and, soon losing its flattened form, ascended rapidly and straight towards the zenith.

Sunrise in the plains is the coolest moment of the day; but this change of temperature does not make a very lively impression on the organs. We did not find the thermometer in general sink below  $27\cdot5$ ; while near Acapulco, at Mexico, and in places equally low, the temperature at noon is often  $32^{\circ}$ , and at sunrise only  $17^{\circ}$  or  $18^{\circ}$ . The level surface of the ground in the Llanos, which, during the day, is never in the shade, absorbs so much heat that, notwithstanding the nocturnal radiation toward a sky without clouds, the earth and air have not time to cool very sensibly from midnight to sunrise.

In proportion as the sun rose towards the zenith, and the earth and the strata of superincumbent air took different temperatures, the phenomenon of the mirage displayed itself in its numerous modifications. This phenomenon is so common in every zone, that I mention it only because we stopped to measure with some precision the breadth of the aerial distance between the horizon and the suspended object. There was a constant suspension, without inversion. The little currents of air that swept the surface of the soil had so variable a temperature that, in a drove of wild oxen, one part appeared with the legs raised above the surface of the ground, while the other rested on it. The aerial distance was, according to the distance of the animal, from 3' to 4'. Where tufts of the moriche palm were found growing in long ranges, the extremities of these green rows were suspended like the capes which were, for so long a time, the subject of my observations at Cumana. A well-informed person assured us, that he had seen, between Calabozo and Uritucu, the image of an animal inverted, without there being any direct image. Niebuhr made a similar observation in Arabia. We several times thought we saw on the horizon the figures of tumuli and towers, which disappeared at intervals, without our being able to discern the real shape of the objects. They were perhaps hillocks, or small eminences, situated beyond the